

AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-6. (Cancelled)

7. (Previously presented) An integrated circuit comprising:

 a base chip including one or more circuits configured to

 receive a vehicle battery voltage;

 convert the vehicle battery voltage to a regulated voltage;

 provide the regulated voltage as an output of the integrated circuit;

 monitor the vehicle battery voltage;

 provide a reset signal in response to the monitoring of the vehicle battery voltage;

 receive analog signals from a serial communication interface/universal asynchronous receiver transmitter (SCI/UART) interface, the analog signals corresponding to data formatted for a Local Interconnection Network (LIN) protocol;

 identify individual bytes from a digital data signal;

 identify a LIN protocol header from at least one of the individual bytes;

 detect a bit rate for the received analog signals in response to the detected LIN protocol header and with reference to a clock signal;

 convert the analog signals to a digital data signal in response to the detected bit rate;

 perform a serial to parallel conversion on the digital data signal; and

 provide the parallel-converted digital data signal as an output of the integrated circuit.

8. (Previously Presented) The integrated circuit of claim 7, wherein the one or more circuits are further configured to

 receive data from a parallel bus input to the integrated circuit;

convert the data from the parallel bus input to a serial form; and
transmit the serial form of the data from the parallel bus input on the SCI/UART interface in response to the detected bit rate.

9. (Previously Presented) The integrated circuit of claim 7, wherein the one or more circuits are further configured to provide a watchdog function and in response to the watchdog function provide an interrupt as an output of the integrated circuit.

10. (Previously Presented) The integrated circuit of claim 7, wherein the base chip further includes a resistor-capacitor (RC) clock generation circuit that is configured to provide the clock signal.